



**Name of Project :- HCMP-WASH- ABR AT CAMP -14 ,
BLOCK-D, Hakimpara , Ukhiya, Cox's Bazar.**

Designer :-Engr. Shaif Nabi

PM :-Md.Sayedur Rahman

All Kinds of Design CAD by :-

Md.Abdullah Al Mamun Deploma in Civil engr.

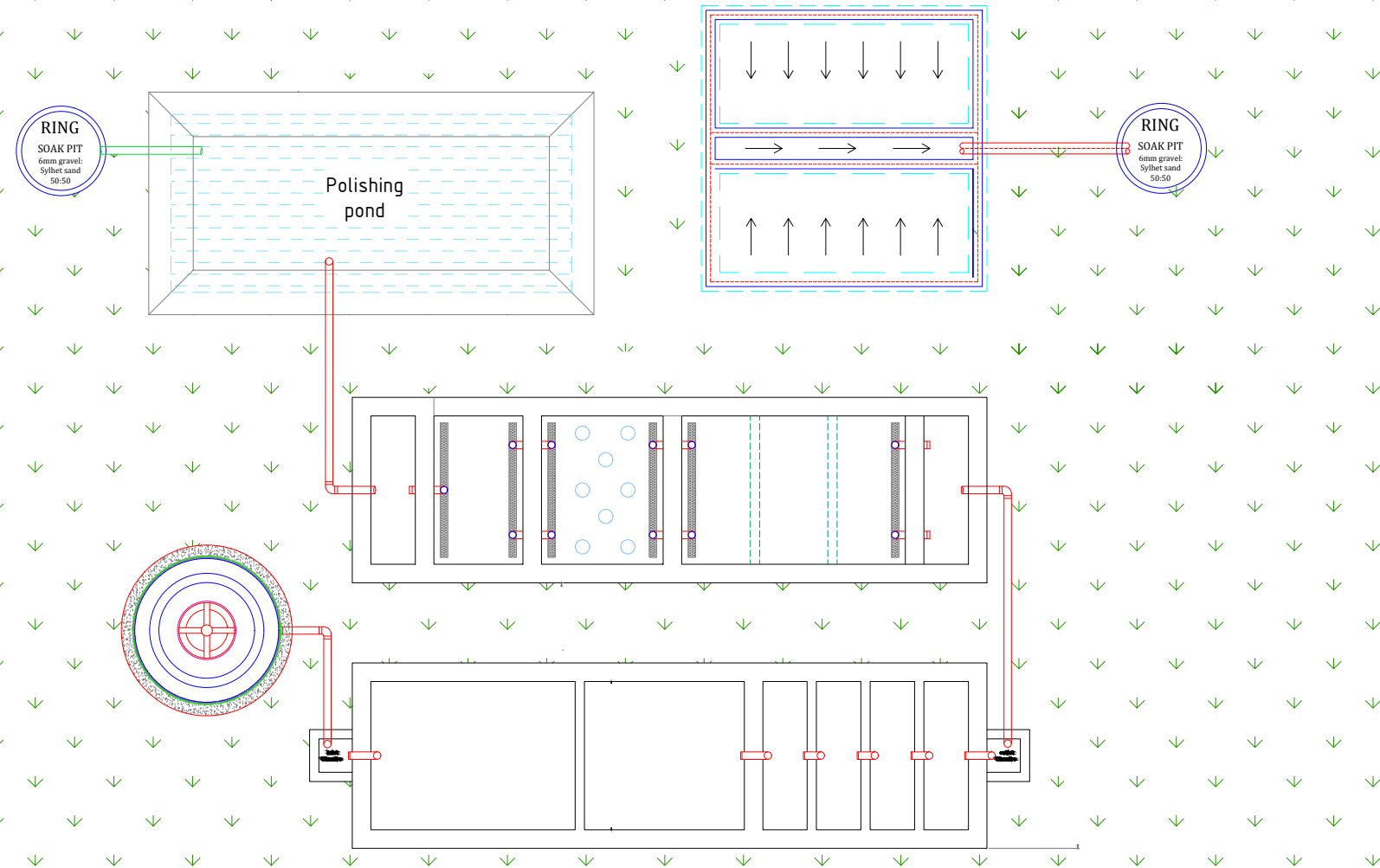
Doner :- Unicef

Partner :- BRAC

Facility :- ABR AT CAMP -14 ,BLOCK-D ,Capacity-70 cum Date :-

GPS :- Latitude :-

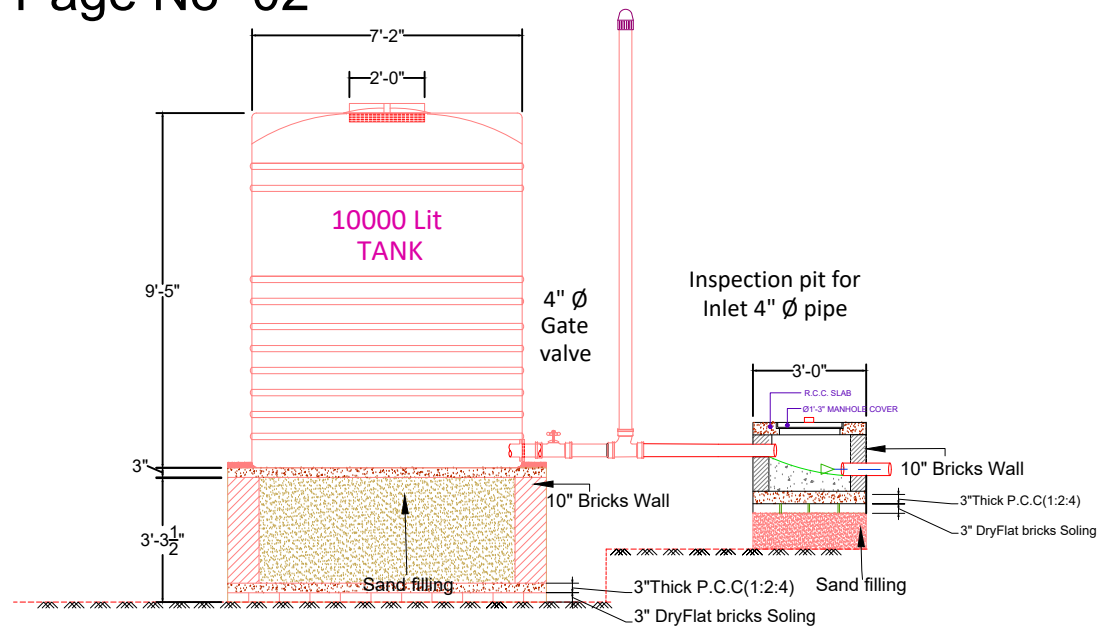
Longitude :-



Site Plan

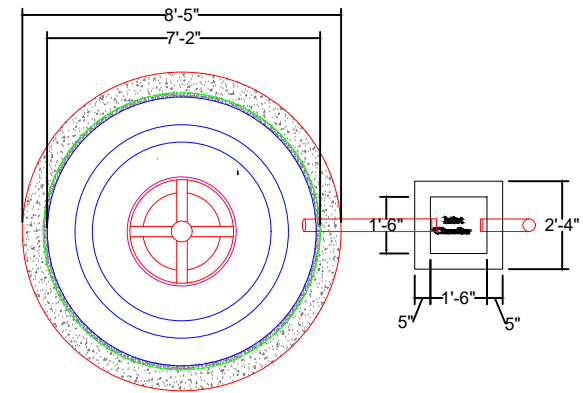
AB R AT C AMP - 1 4 , B L O C K - D

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1000 lit tank with Base Section

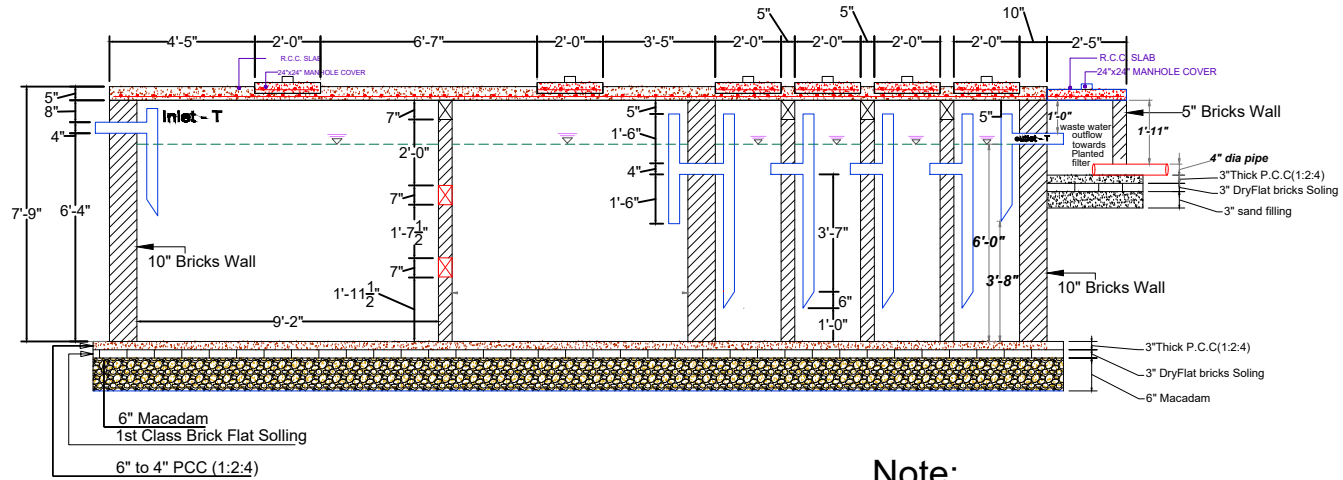
Inspection pit for Inlet with Base Section



Tank with Inspection pit for Inlet plan

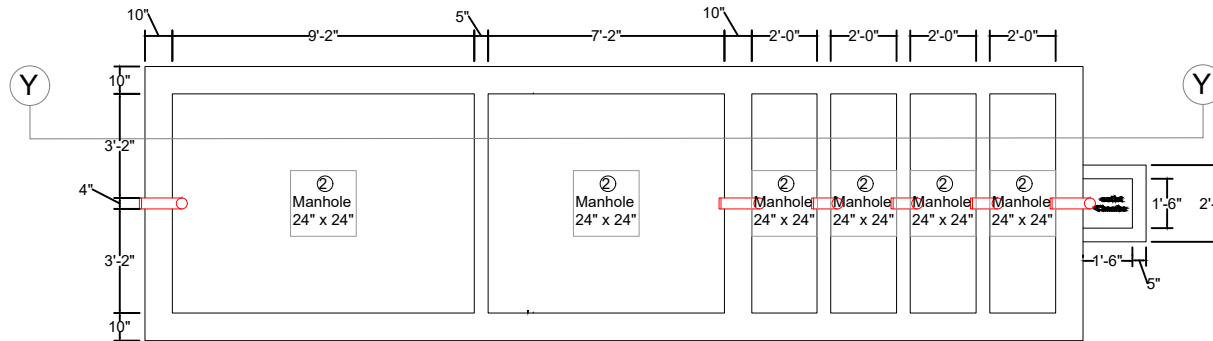
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AB R AT C AMP - 1 4 , B L O C K - D



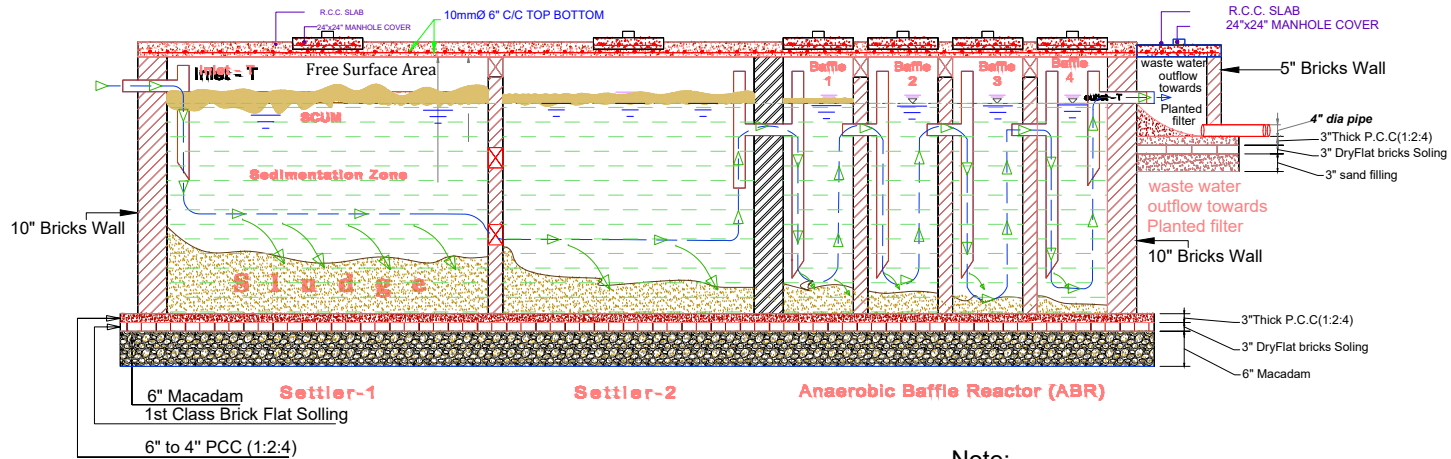
Y-Y Section Of Settler Tank and Baffled Reactor

Note:
 X Direction 10mm Ø @ 6" c/c
 Y Direction 10mm Ø @ 6" c/c
 Slab Thickness 4"



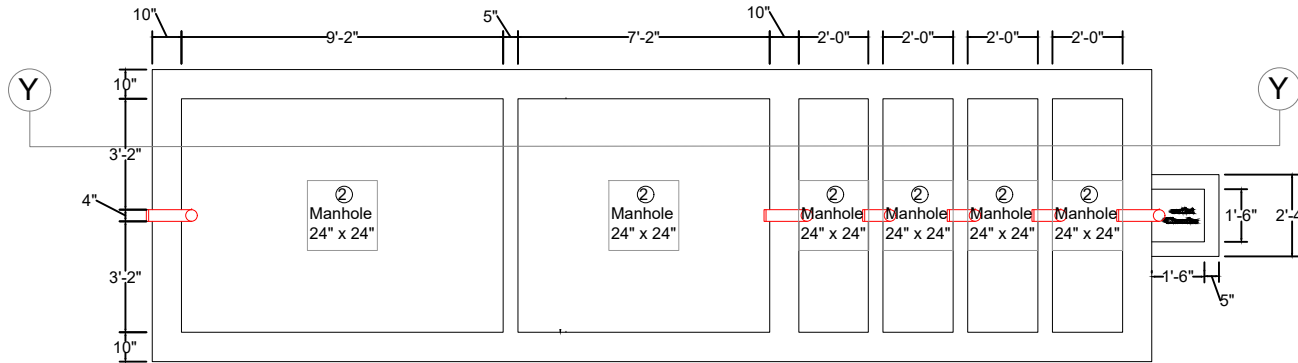
N Plan Of Settler Tank and Baffled Reactor

AB R AT C AMP - 1 4 , B L O C K - D



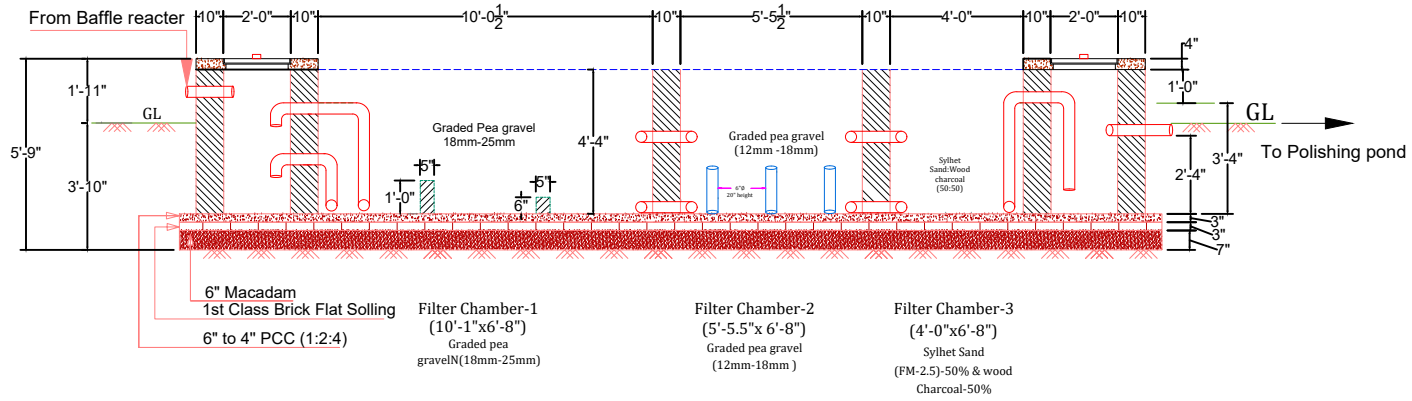
Note:
 X Direction 10mm Ø @ 6"c/c
 Y Direction 10mm Ø @ 6"c/c
 Slab Thickness 4"

Y-Y Section Of Settler Tank and Baffled Reactor

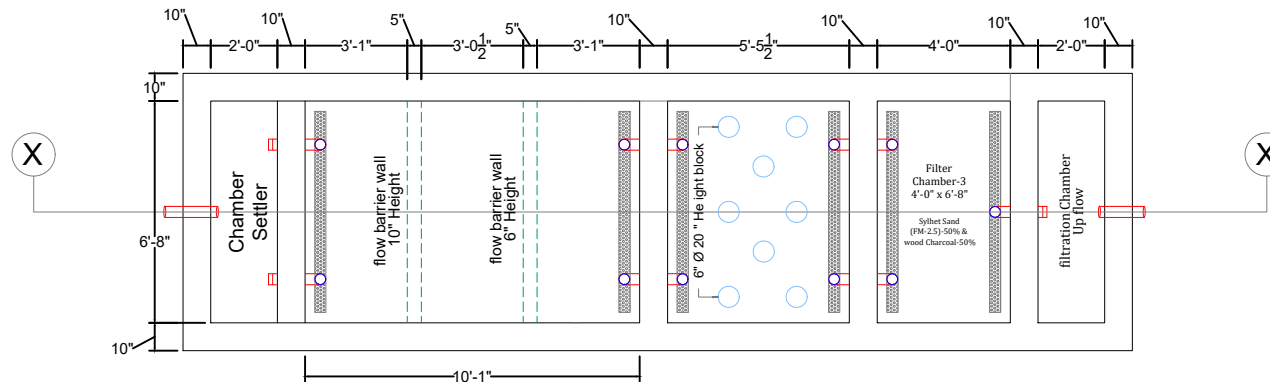


N Plan Of Settler Tank and Baffled Reactor

AB R AT C AMP - 1 4 , B L O C K - D

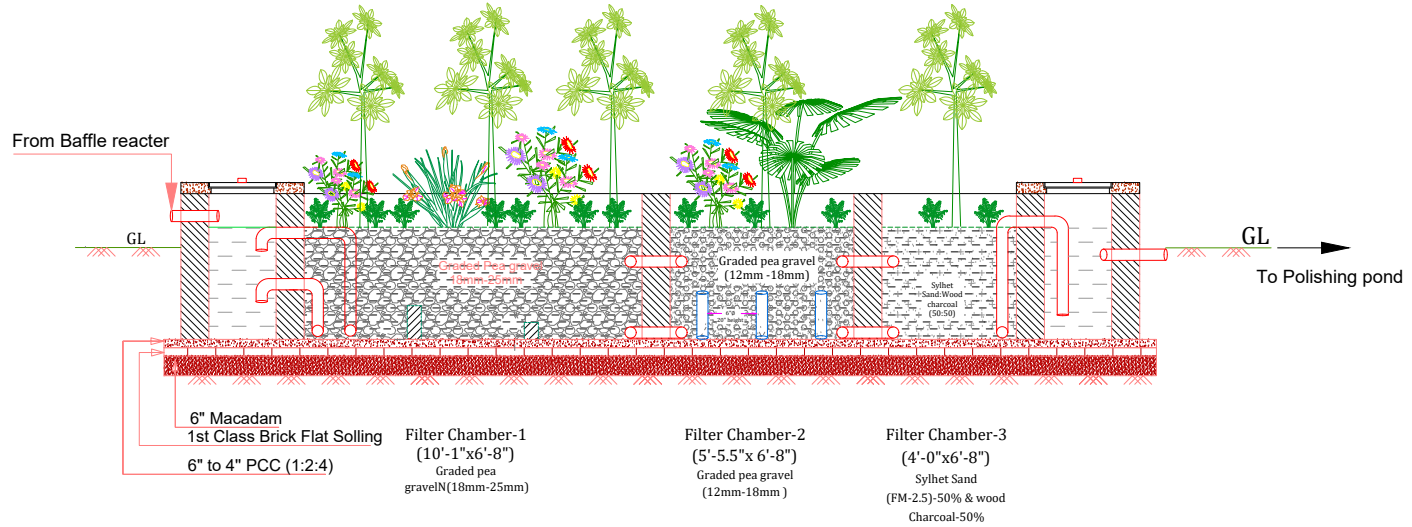


PLANTED GRAVEL FILTER (SECTION X-X)

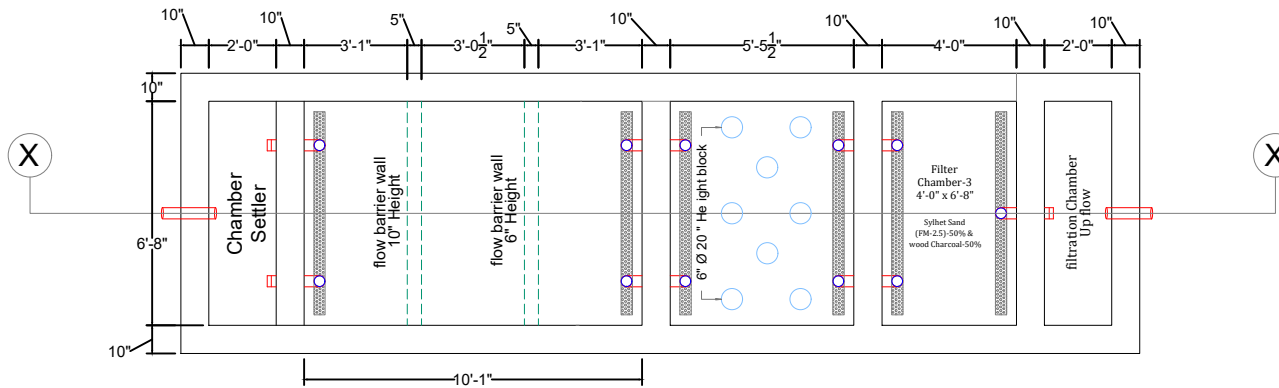


PLANTED GRAVEL FILTER BED PLAN

AB R AT C AMP - 1 4 , B L O C K - D

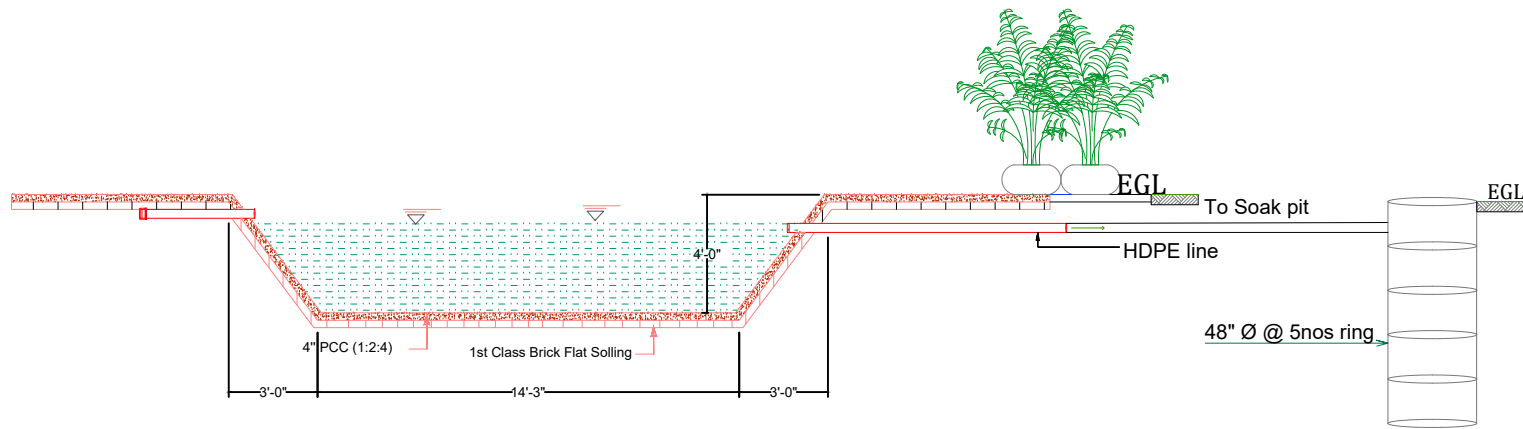


PLANTED GRAVEL FILTER (SECTION X-X)

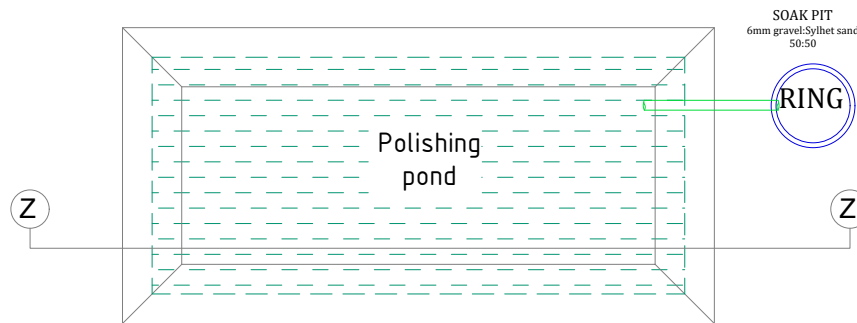


PLANTED GRAVEL FILTER BED PLAN

AB R AT C AMP - 1 4 , B L O C K - D

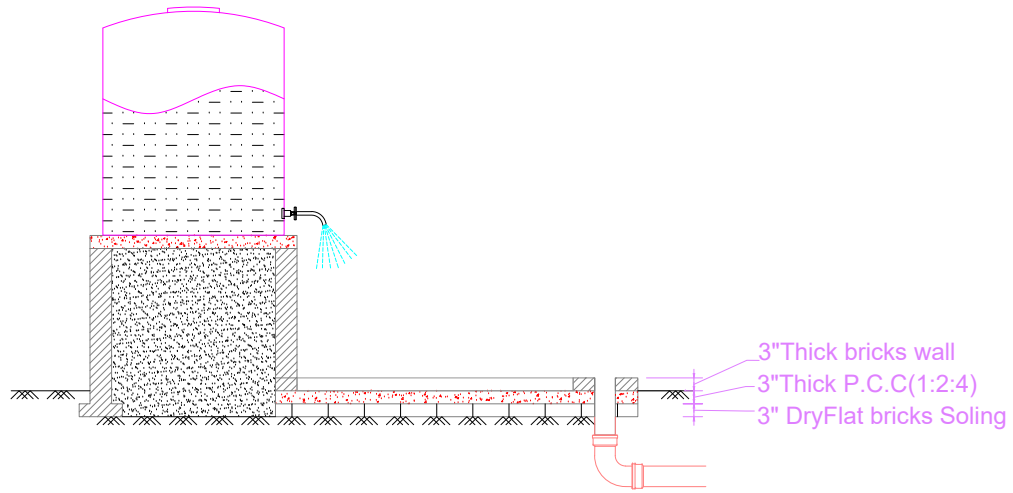


Z-Z Section of Polishing Pond Plan

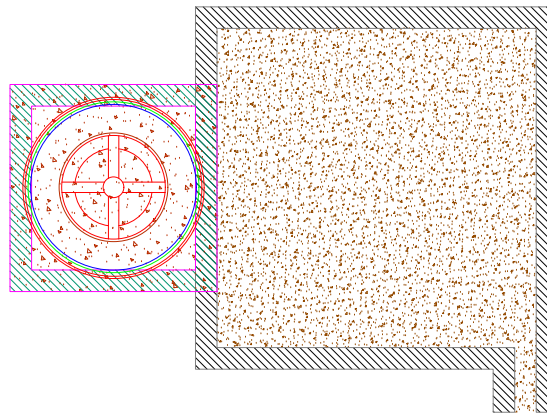


POLISHING POND PLAN

NOTE:
AEROBIC POLISHING POND TREATMENT WORK
 Depth: 1.5 m
 To keep the condition aerobic throughout
 - Nitrates, Co2, Phosphates
 Born Algae, Algae create photosyntheses,
 photosyntheses create more O2,
 Thats why more algae born that inter
 Independency call Bacterial Algae symbiosis

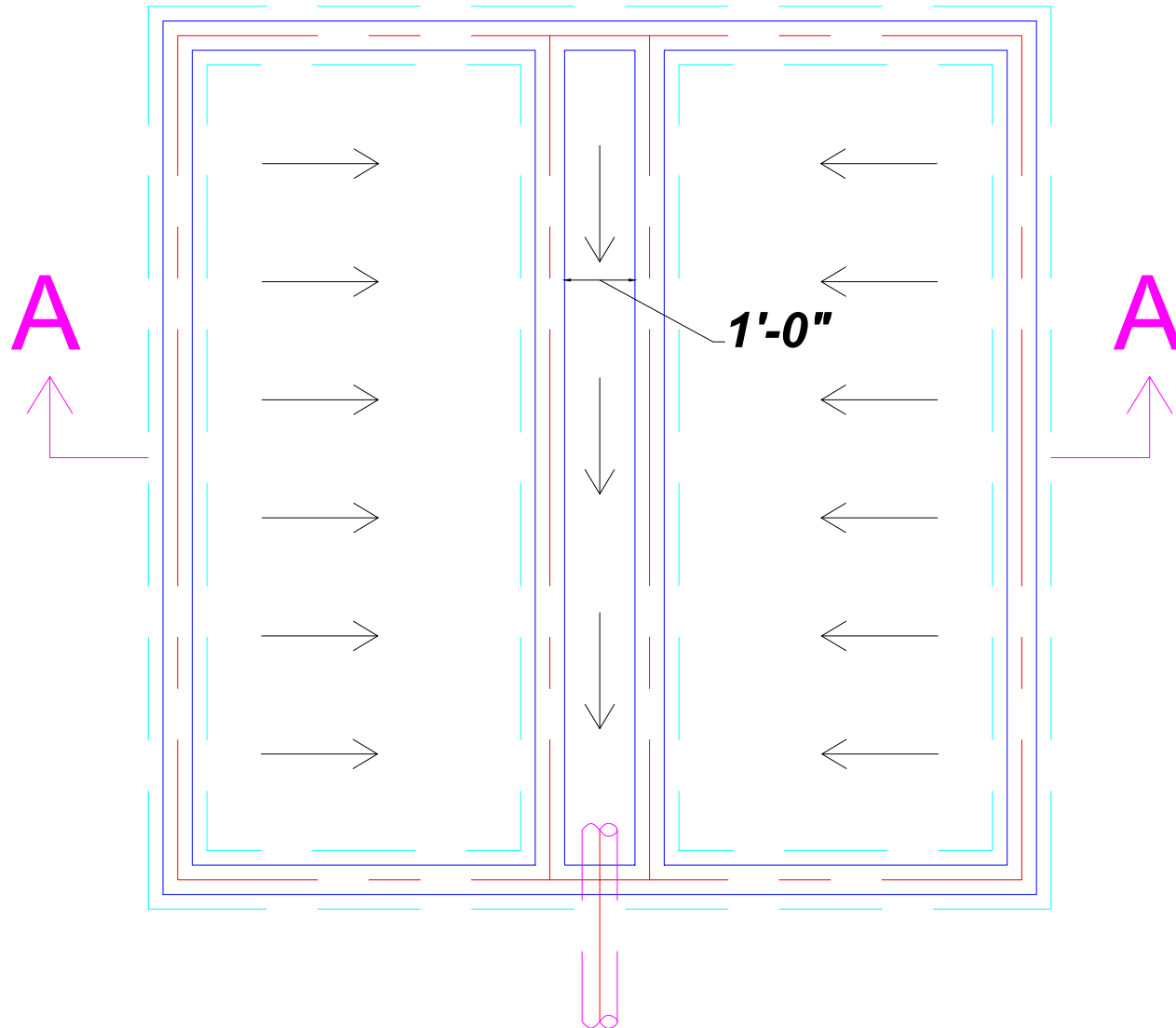


Cleaning Station Section

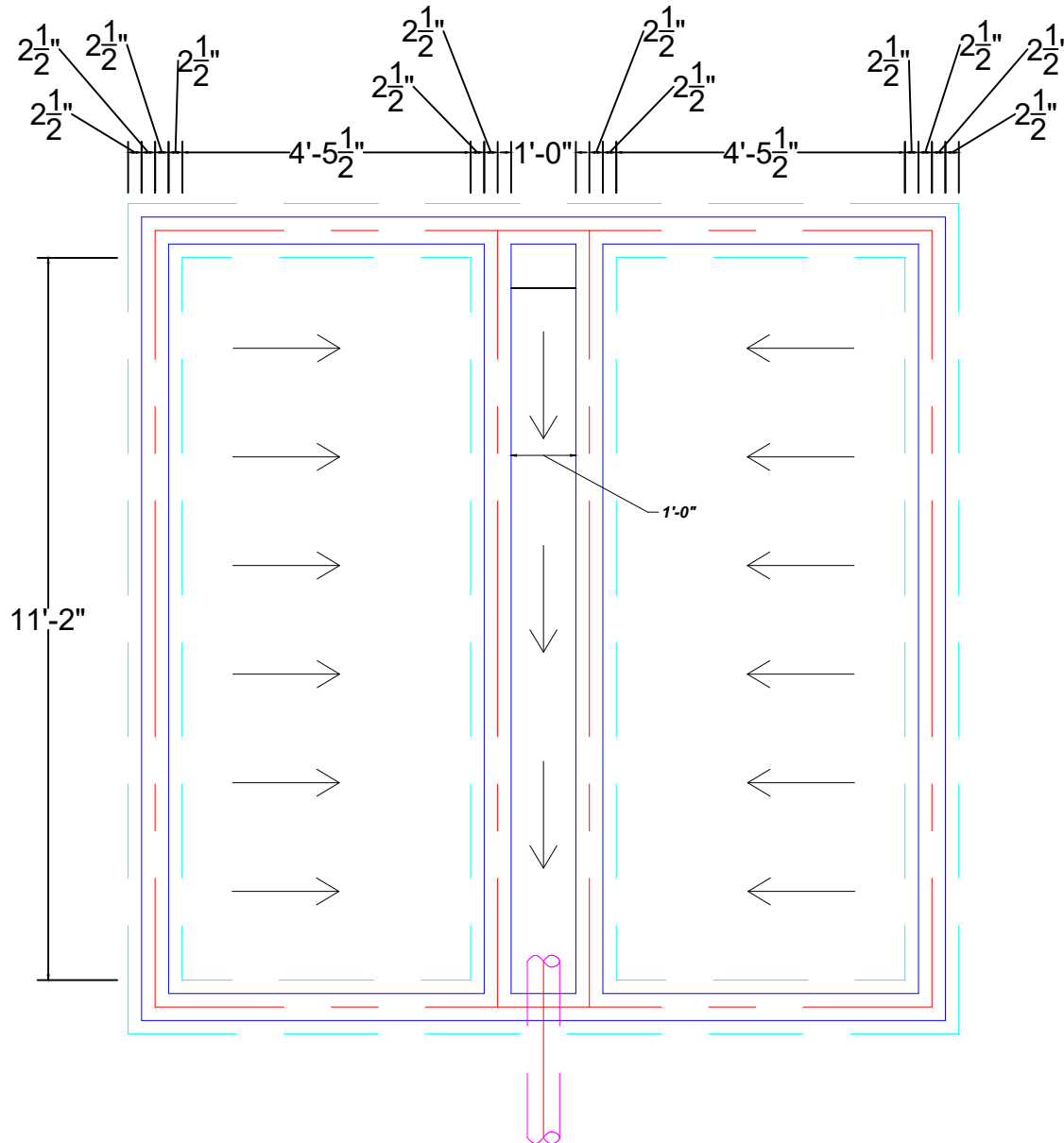


Cleaning Station Plan

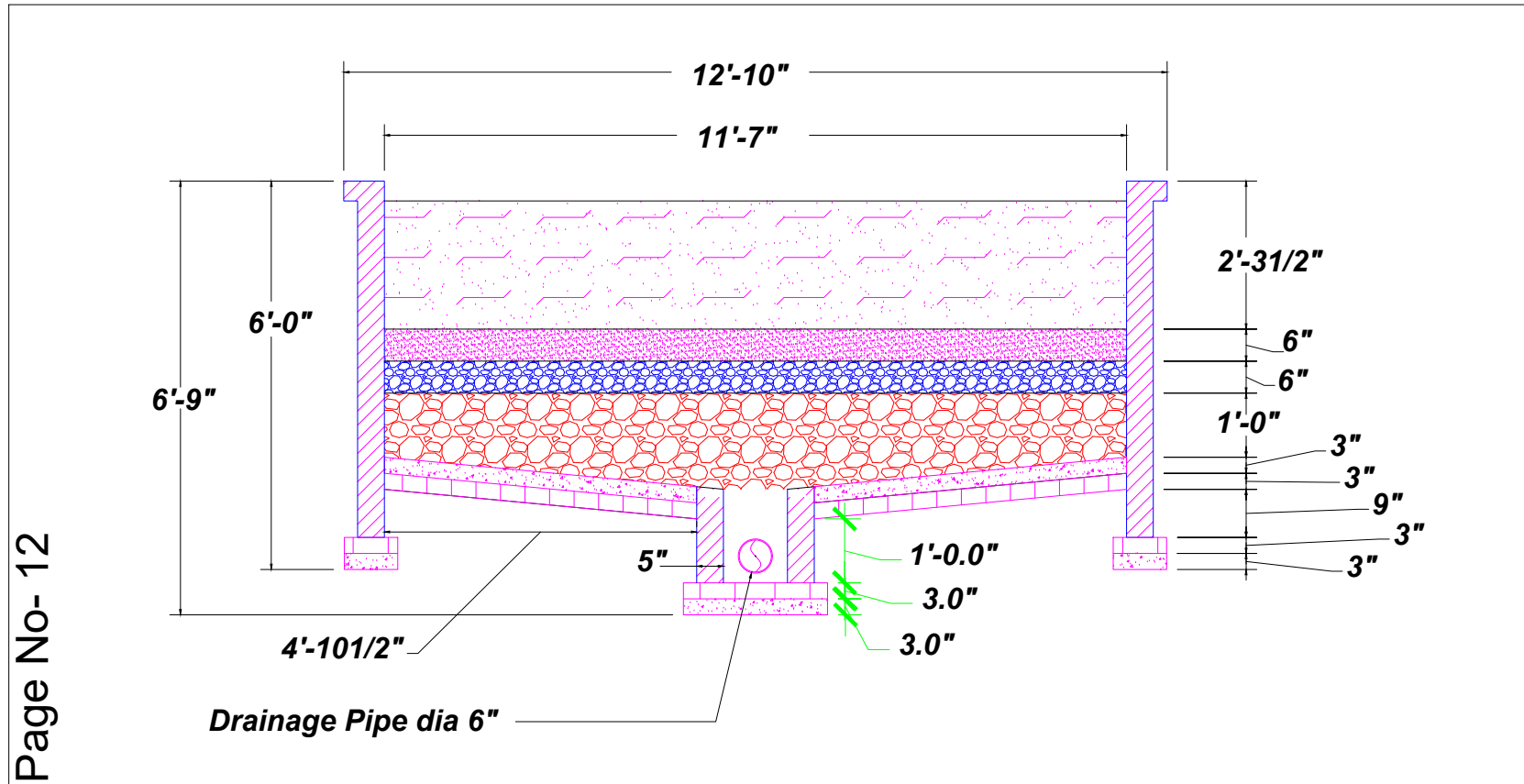
Sludge Drying Bed Plan



Sludge Drying Bed Plan

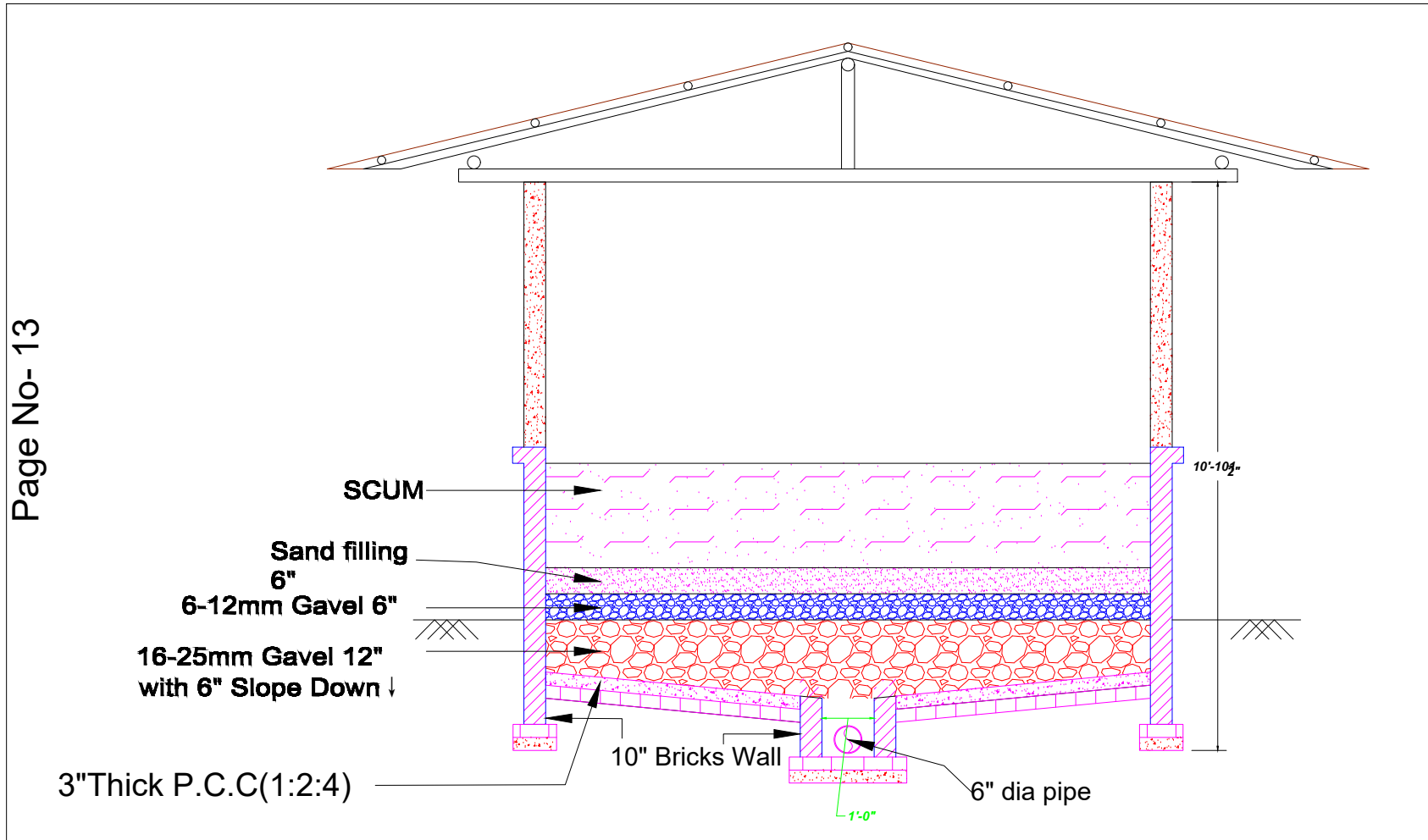


Cross Section of unplanted Drying Bed

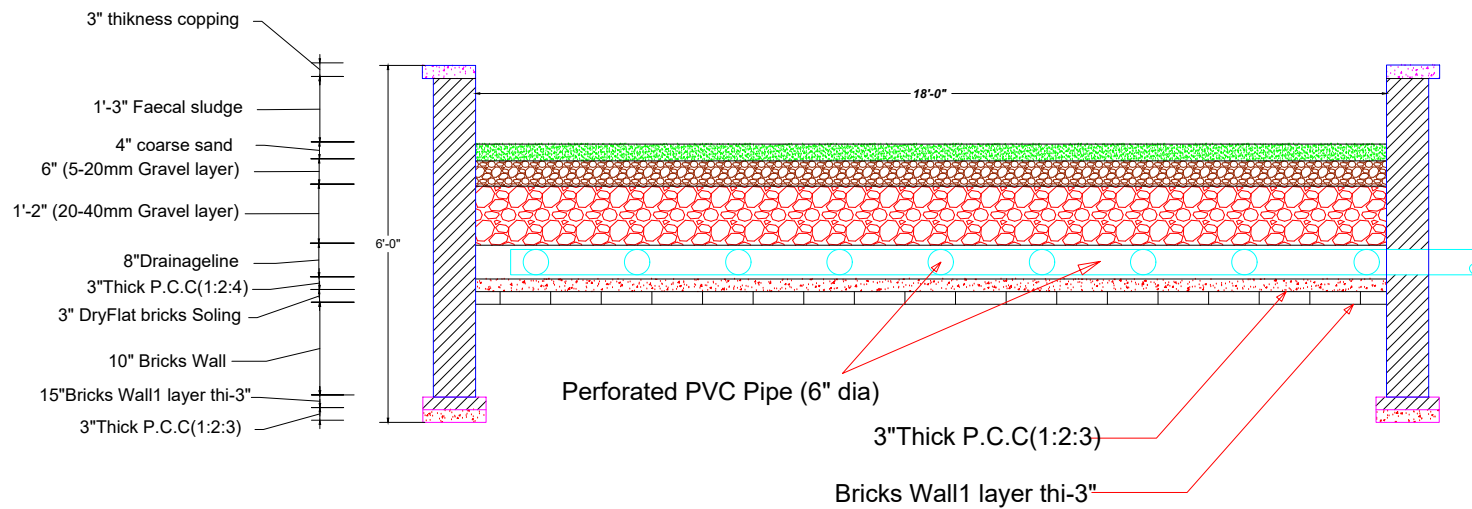


Cross Section of unplanted Drying Bed

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Cross Section of unplanted Drying Bed



Bill of Quantities
Anaerobic Baffled Reactor (ABR)

SL No.	ITEM DESCRIPTION	Unit	QTY	UNIT COST (BDT)	TOTAL COST (BDT)
1	Earth Work Excavation for Polishing Pond, Planted Gravel Filter & Settler Tank & Baffled Reactor foundation etc. by manually excavating earth to the lines, grades and elevation as per the drawing & design.	cft	4,000	20	80,000
2	Sand Filling: Sand filling in foundation trenches and inside plinth with sand (minimum F.M. 1.20) in desire layers in/c leveling, watering and consolidating each layer up to finished level etc. all complete as per direction. Dry density after compaction shall not be less than 95% of MDD.	cft	350	34	11,900
3	Single Layer Brick Flat Soling: Single layer brick flat soling with first class brick at the base of the foundation, including carrying bricks, filling the interstices tightly with sand of minimum (FM 1.50), watering, levelling, dressing etc. all complete as per direction of the EIC	sft	650	70	45,500
4	Cement concrete work (CC) in foundation with portland cement, best quality coarse sand (50% quantity of sand minimum F.M. 1.2 and 50% quantity of coarse sand of minimum F.M. 2.5) and Brick chips 20mm down graded, in/c mixing appropriately, casting, laying, compacting and curing for the requisite period. The mixture proportion of cement sand and aggregate should be 1:3:6. All completed as per the instruction of the EIC/NGOF.	cft	400	255	102,000
5	10" Brick work with 1st class bricks in cement mortar (1:4) including fitting the interstices with mortar, raking out joint, cleaning and soaking bricks at least for 24 hours before use, washing of sand if necessary, curing for requisite period etc. all complete as per direction of the Field Engineer	cft	820	240	196,800
6	5" Brick work with 1st class bricks in cement mortar (1:4) including fitting the interstices with mortar, raking out joint, cleaning and soaking bricks at least for 24 hours before use, washing of sand if necessary, curing for requisite period etc. all complete as per direction of the Field Engineer	cft	70	240	16,800
7	R.C.C.Work (1:2:4): Reinforced cement concrete works for the Settler Tank & Baffled Reactor & Inception pit of the Roof Slab having minimum cylinder crushing strength 25 MPa at 28 days with portland cement (conforming to BDS 232), best quality coarse sand (50% quantity of sand minimum F.M. 1.2 and 50% quantity of coarse sand of minimum F.M. 2.5) 20 mm down graded Brick chips including breaking chips and screening, centering, shuttering, mixing casting, laying, compacting, curing up to the recommended time, making shuttering fully leak proof, etc and all complete as per the design sepecification & instruction of the EIC/NGOF.	cft	145	320	46,400
8	10mm M.S Deformed Bar (60/72 grade): Supplying and fabrication of M.S. deformed bar of required size and length for all types of RCC work including straightening the rod, removing rust, cleaning, cutting, hooking, bending, binding with supply of 22 B.W.G GI wire, placing in position including lapping spacing and securing them in position by concrete blocks (1:1), metal chairs etc. complete including cost of all materials, labor, local handling incidentals necessary to complete the work as per the design, drawing.	kg	325	95	30,875
9	Plaster with N.C.F work (wall): Minimum 12mm thick cement plaster (1:4) including washing of sand (F.M of sand:1.2), cleaning of wall surface, curing for requisite period all complete as per direction of the EIC	sft	2,700	25	67,500
10	Supply and filling of 18mm-25mm sized Gravel in the Planted Gravel filter all complete as per specifications and direction of the EIC.	cft	1,200	290	348,000
11	3'-0" dia Manhole cover including fitting and fixing. All complete as per direction of the EIC.	Nos	12	2,500	30,000
12	4" dia Hose pipe: Best quality suction hose pipe (RFL).Including pipe cage fitting and fixing. All complete as per direction of the EIC.	rft	1,500	210	315,000
13	4" dia UPVc pipe including fitting and fixing. All complete as per direction of the EIC.	rft	300	220	66,000
14	Site Development	Job	1	100,000	100,000
15	Washing Station including shallow TW for FSM Workers for washing purpose after work.	Job	1	60,000	60,000
16	Bamboo Fencing	sft	1,260	50	63,000
Sub-Total (BDT)					1,579,775
Item	Description	Unit	Quantity	UNIT PRICE	AMOUNT
Drying bed (10'X8')					
1	Brick (for BFS & Brick wall)	Nos	2000	13	26,000
2	Cement	Bag	20	510	10,200
3	Sand, FM 1.5	cft	30	34	1,020
4	Sylhet Sand, FM 2.5	cft	40	100	4,000
5	Coarse aggregate (20 mm to 40 mm)	cft	150	280	42,000
6	Coarse aggregate (5 mm to 20 mm)	cft	50	280	14,000
7	Corrugated plastic TIN (7'X2.5'), 1mm thickness	Nos	8	1100	8,800
8	RCC pillar (10'X5"X5")	Nos	8	1200	9,600
9	wood (3"X2") & (3"X1.5")	cft	6	900	5,400
10	Nail Different size (1.5 to 4 inch)	kg	6	170	1,020
11	Borak Bamboo	Nos	35	500	17,500
12	Muli Bamboo	Nos	150	64	9,600
13	Rope Nylon (10 mm)	kg	3	190	570
14	Labor & Mason (for earth excavation & filling, BFS laying, Brick wall construction, PCC work & bamboo fencing)	person	150	400	60,000
Sub Total (BDT)					209,710
Total cost (BDT)					1,789,485